REMARKS

INTRODUCTION

In accordance with the foregoing, claims 4, 6, and 9 have been amended, and claims 12-17 have been canceled, without prejudice or disclaimer. No new matter is submitted.

Claims 4-6 and 9 are pending and under consideration.

OBJECTION TO CLAIMS 6 AND 9

In view of the above amendments to claims 6 and 9, it is respectfully requested that this objection be withdrawn.

REJECTION UNDER 35 USC §112

Claims 4-6 and 9 stand rejected under 35 USC §112, first paragraph, with the Office Action indicating that the claimed defined direction failed to comply with the written description requirement. This rejection is respectfully traversed.

In view of the above, it is respectfully submitted that the Office Action objectionable phrasing has been removed from the claims.

Withdrawal of this rejection is respectfully requested.

CLAIMED INVENTION CRITICALITY

In reviewing the Office Action, notably page 6 of the Office Action stating the non-criticality of the claimed second surface being a diffusible surface and not the first surface, it appears that the Office Action has not sufficiently considered the primary embodiment and corresponding description in the present application.

In particular, the Office Action states: "Regarding to the feature that the second slope of the repeated projections is a diffusible surfaces ... In other words, in the embodiment described in pages 12-13 and shown in fig. 6, the diffusible surface is formed on the first slope, not the second slope. In the embodiments as described in page 13 and shown in figs. 7-8, both the first and second slopes are diffusible slopes."

However, based upon the present application it is respectfully submitted that a majority of the present application, and described invention, is focused on the benefits of the second slope being diffused.

For example, FIGS. 1 and 3 of the present application clearly demonstrate the "first" slope (M1) not being diffused and the "second" slope (M2) being diffused.

FIG. 1

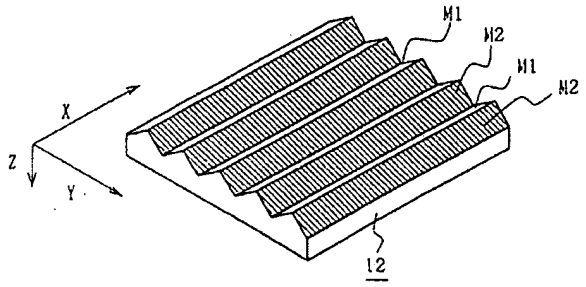


FIG. 3

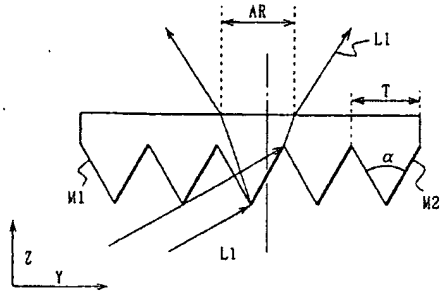


FIG. 1 illustrates an "up-side" down orientation (see the illustrated z axis). FIGS. 1 and 3 both illustrate the present invention of the first slope M1 not being diffused and the second slope M2 being diffused.

Similarly, FIGS. 4 and 5 demonstrate advantages of such a second surface being diffused. FIGS. 4 and 5 demonstrate a particular experiment that was performed with the same arrangement.

FIG. 4

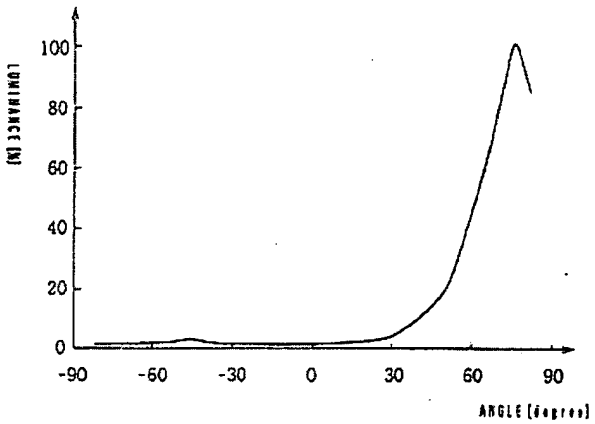
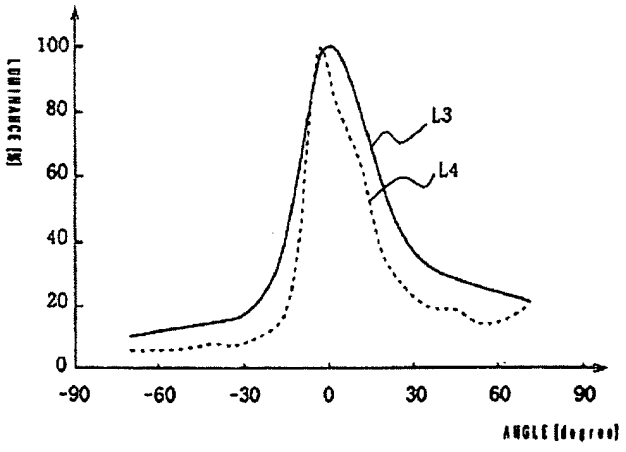


FIG. 5



Here, pages 11 and 12 of the present application clearly identify the advantages of such a second slope diffusion, in the primary embodiment shown in FIGS. 1-3.

Page 12, line 2, of the present application explains that FIG. 4 shows directivity in the absence of the prism sheet 12:

"It is understood from this characteristic curve that illumination light was

emitted in a direction inclined chiefly to the distal end of the wedge shape. In this measuring, the frontal direction (normal direction) of the exiting surface was defined as an angle of 0 degrees, and the light-source side and the distal-end-of-wedge-shape side were defined as negative direction and a positive direction, respectively.

To the contrary, FIG. 5 is a characteristic curve showing directivity in the case of the roughened exiting-surface slopes (symbol L3) in comparison with case of the unroughened exiting-surface slopes (symbol L4). In this case, it is understood that the angle of field of vision was expanded without a light diffusible sheet.

By thus roughening the exiting-surface slopes M2 of the prism sheet 12 to form a light diffusible surface, it is possible to illuminate the exiting surface of the prismatic surface 12 substantially uniformly for emission of illumination light. As a result, the color of the reflecting sheet 11 cannot be recognized with it is observed from the front side, thus improving the quality of illumination."

FIGS. 6-10 merely demonstrate different available embodiments, again noting that at least FIGS. 7-10 clearly illustrate a similar second slope being diffused for demonstrative purposes regarding the present invention.

Thus, the present invention, and benefits thereof, is primarily directed to the embodiment with the first slope not being diffused and the second slope being diffused.

A basic and the most important feature of the present invention is that light diffusion is effected, at light entrance side of the light control element, by *inner-reflection at roughened slopes M2 after* emission light from a light guide plate is introduced into the light control member (prism sheet) through non-roughened (i.e. non-diffusive) slopes M1.

This claimed sole diffraction of the second slopes brings the following merits (a) and (b) at the same time. These merits are not expected results of either of the Office Action relied upon Background or Watai.

(a) Since diffusion occurs at the entrance side of the light control element (after entering the light control elements upon incidence to inner surface of slope M2), the proceeding direction of light is caused to become angularly expanded before reaching the light exiting side of the light control element.

As a result, brightness of the light exiting side of the light control element is made even.

Conversely, conventional systems (such as Watai) that perform the diffusion at the light exiting side of the light control element do not achieve this benefit.

Further, as noted above, due to this unique arrangement the seeing-through effect of the reflection sheet is also reduced by diffusion before light exits the light exiting side of the light control element.

(b) Since diffusion occurs after light is introduced into the light control element (i.e., diffusion occurs within the light control element upon incidence to the inner surface of slope M2), loss of light before introduction to the light control element can also be avoided.

Most light that is incident on the light control element, i.e., upon direction toward the first slopes M1, is furthered into the light control element, because the first slope M1 is not diffused.

If light is diffused before light is introduced into the light control element at first slopes M1, a substantial amount of light will be prevented from being introduced into the light control element.

In addition, in such a case if the first slope M1 is diffused, some of the light introduced into the light control element will not thereafter be incident on the second slopes M2 because proceeding direction of light is angularly expanded beyond the second slopes M2 directly out of the light control element.

Thus, with the first slope M1 being diffused, some light fails to undergo the claimed inner-reflection at the second slope M2, leading to an increased loss of light.

Thus, there is substantial criticality to the claimed arrangement of only the claimed second slopes being diffused and light being diffused by the second slopes after entering the light control element through the non-diffused first slopes.

In other words, the claimed invention is advantageous at least because directivity of incident light to and through the first slopes of the light control element to thereafter be diffused while within the light control element.

As understood from currently amended independent claim 4, incident light received by the first slopes M1 of the light control element was emitted from the exiting surface of the light guide plate obliquely toward the first slopes.

Oblique incident light has a remarkably clear directivity.

Accordingly, this directivity is not spoiled on incidence to the first slopes M1 in the present invention. Directivity is maintained after entering into the light control element, enabling substantially all of the light introduced into the light control element to reach the second slopes M2 without being direction-disturbed.

Conventional systems that diffuse all entry surfaces of a light control element, or a corresponding diffusing film directly before a light control element, result in less desirable loss of light and less light directivity.

Here, again, if the first slopes have diffusive properties, incident light received by the first slopes are diffused and directivity of incident light is spoiled on incidence to the first slopes M1.

As a result, a substantial part of the light introduced into the light control element will directly reach the exiting side of the light control element without undergoing redirecting by the second slopes.

Further, with such an arrangement, such direct light would be emitted from the exiting side toward directions largely deviated from the frontal direction, namely useless directions. A user viewing a corresponding screen would see less light as more light has been directed in non-usable directions.

With such an arrangement there are fundamental unexpected results with the presently claimed arrangement not existent in the Office Action's relied upon Background or Watai.

Thus, though the Office Action has indicated that because the application provides multiple embodiments, the selected second slope being solely diffused is not critical to the invention, applicants respectfully submit that this claimed feature is a critical aspect of the invention. The second slope solely being diffused, as noted in the application experimentally provides advantages over conventional systems.

Therefore, it is respectfully requested that the Office Action reliance upon the differences between a single slope being diffused and both slopes being diffused being non-critical be withdrawn. In addition, as briefly noted below, it is respectfully submitted that such a modification of the Office Action relied upon reference is further not obvious.

REJECTION UNDER 35 USC §103

Claims 4-6 and 9 stand rejected under 35 USC §103(a) as being unpatentable the background of the present application (Background), in view of Watai, Japanese Patent Application No. 6-250182. This rejection is respectfully traversed.

As noted above, the Office Action has appeared to have relied substantially upon a premise that the use of two diffused surfaces compared to a single diffused surface is not of substantive critical difference.

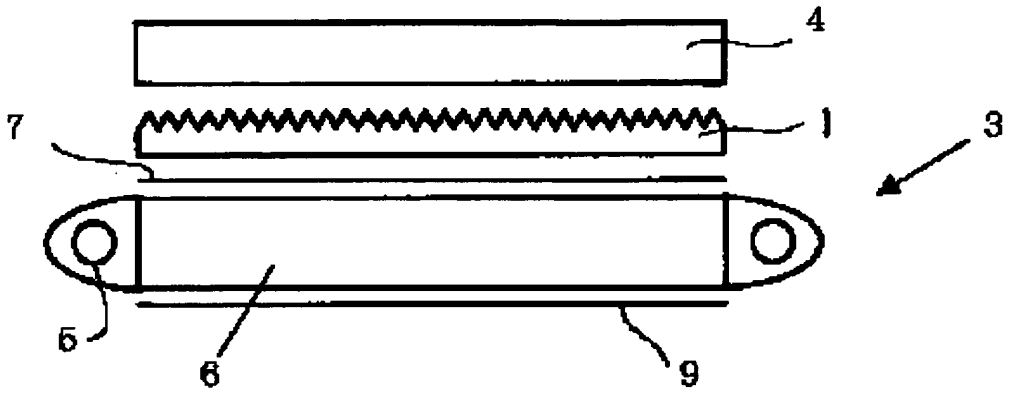
However, as also noted above, there are substantial differences between only the second slope being diffused and both slopes being diffused. Further, embodiments that diffuse the first slope reduce the advantages of the present application. There are differences in advantages and benefits between the different embodiments.

Again, the arrangement of the second slopes being diffused and the first slopes not being diffused, such that light is incident through the first slope and thereafter incident on the inner surface of the second diffused slope, provides advantages not disclose or suggested by

the cited prior art. Only the present application discusses the potential drawbacks of conventional systems and the unique arrangement to overcome the same.

Differently, Watai demonstrates a different arrangement for a different purpose. The diffusing performed by Watai fails to achieve the above noted benefits.

Watai demonstrate such an arrangement in FIG. 5:



In this arrangement, the two light sources generate non-directional light. All light that eventually radiates directly upward toward prism sheet 1 is collected within the transparent material 6 and reflected off the mirror 9 directly upward toward the diffusion plate 7 and prism sheet 1.

As explained in Watai, with such an arrangement a striping or moiré affect can be caused to occur and be seen by a user. FIG. 6 illustrates a top-down view of a conventional prism sheet, showing striping at the peaks of each prism formation, and FIG. 8 illustrates another top-down view of a conventional prism sheet, showing several prism formations.

FIG. 6

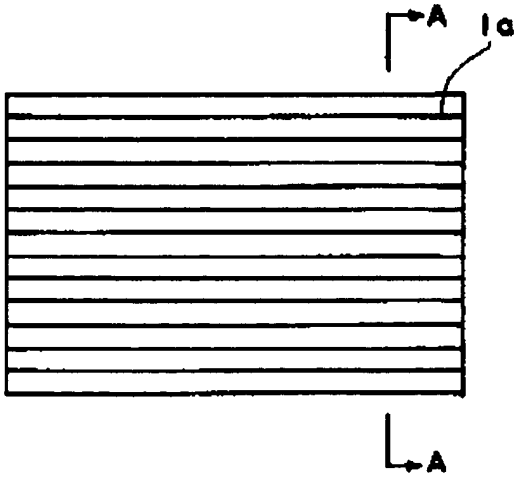
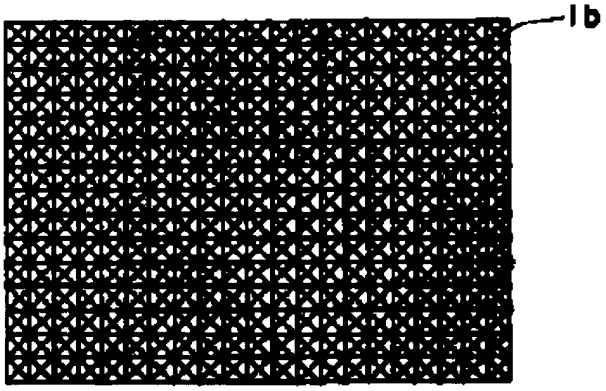
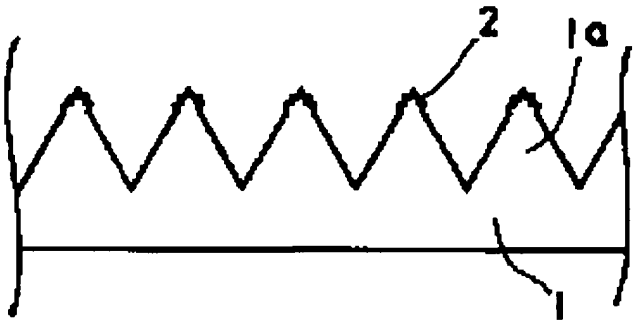


FIG. 8



Thus, the invention of Watai is particularly for preventing such a striping or moiré affect from being seen in the particular arrangement.

For example, FIG. 3 of Watai demonstrates a way of diffusing the peak areas of the prism sheet 1.



Thus, all embodiments of Watai are focused on solving the striping or moiré affect caused by the *exiting* surface of the prism sheet 1 in the described arrangement of FIG. 5 of Watai.

Again, the invention of Watai is solving this striping or moiré affect caused by the particularly arranged prism sheet 1 in the arrangement of FIG. 5 of Watai.

It is submitted that any change suggested in the Office Action for Background to include the prism sheet of Watai must take into consideration the original purpose of the invention of Watai.

As noted above, in a different arrangement from that of Watai, independent claim 4 claims an arrangement of the light control element receiving oblique directional light (See FIG. 3 of the present application demonstrating the non-perpendicular, i.e., non-normal, inclined light), and with that inclined light radiating into the light control element through a non-diffused first slope and then incident on a diffused second slope while within the light control element.

With the claimed arrangement, all light incident to the light control element may be collected and the directionality of the incident light will not be lost.

Conversely, if light is diffused as entering the light control element, as the only potential interpretation available for modifying Watai into Background, to achieve the same goals of Watai, this directionality would be lost. Further with such an arrangement of Background and Watai would not collect all the light into the light control element, as the diffusible surface would reflect away some of the incident light, i.e., only a portion of incident light would actually enter the light control element. Thus, there are substantial drawbacks to such a modification.

Again, even if it would arguably be presumed that the prism sheet of Watai could be flipped up-side-down relative to a completely different arrangement of light source(s), for incorporation with Background, such an up-side-down arrangement would only place such diffusing elements at the surface that is first to receive incident light or all entry surfaces of the prism sheet to maintain the purpose and advantages of Watai.

The demonstrated single slope diffusion of Watai is based upon the two light sources and the normal directionality of the light radiating toward to through the prism sheet 1. Because light is proceeding in a normal direction, both prism slopes receive light.

Conversely, with a single light source and inclined (oblique) directional light, there is no need for both surfaces to be diffused if the prism sheet is turned upside-down. The second slope would not receive the inclined light until after radiation into the prism sheet after radiating through the first slope. Thus, only the first slope receiving the incident light would need to be diffused.

Corresponding to the claimed first and second slopes, in such a proposed modification of Background to include the prism sheet of Watai, only the first slope would desirably be diffused.

Regardless, again it is again submitted that Watai is primarily focused on diffusing sharp edges of the slopes, e.g., the peaks or the valley, in the configuration of two light sources and light reflected directly upward (i.e., normal to the mirror) toward the prism sheet.

Thus, there is no support in the record suggesting that Background should be modified to include an upside-down prism sheet of Watai, or that with such an upside-down prism configuration would then be further modified to only diffuse a second slope, rather than the first slope that actually first receives the incident light.

The Office Action sets forth on page 6 of the Office Action that a reason for modifying Background is so that the combination will diffuse light passing through the projection. However, as noted above, such a modification of Background and Watai would not diffuse the second slope, as light isn't incident on the second slope.

Further, here, it is noted that independent claim 4 sets forth that light is diffused after being incident the projected through the non-diffused first slope, and thus thereafter diffused while within a light control element.

Thus, it is respectfully submitted that the Office Action suggested modification of Watai would not achieve the goals required by the invention of Watai. Rather, to maintain the goals of Watai, any such modification would be counter to the claimed non-diffused first slope and diffused second slope.

The Office Action notes on page 6 of the Office Action that Watai indicates that "the formation of the diffusing pattern on at least one part of the slopes of each prism is for the purpose of providing a uniform pattern of light in comparison with the use of prismatic configuration without diffusing pattern of the prior art."

However, as noted above, the configuration of the light sources and the direction of light incident the prism of Watai is different than that of Background. The providing of a uniform pattern in Watai is for removing the striping or moiré effect for such a different arrangement.

Further, nothing in Watai supports a conclusion that any surface can be selectively chosen to be diffused or not. Watai diffuses surfaces that may cause the striped or moiré effects. In all embodiments of Watai some portion of the peak or valley of each prism that receives light is caused to be diffused to remove such striped or moiré effects. Any modification of the teaching of Watai into Background would only be suggested to diffuse the same in Background, i.e., at least one of a peak or valley of a surface incident to the light, i.e., only the first slope.

Thus, the teaching of Watai is not to always diffuse surfaces for any reason, but to overcome the problems described in Watai. Watai diffuses surfaces for a particular reason.

On page 6, the Office Action sets forth that the claimed first slope being non-diffused and the second slope being diffused is non-critical, and any modification of Background combined with Watai to have the same would have been obvious.

However, as noted above, such different diffused surfaces provide advantages not set forth with embodiments with only the first slope being diffused or both slopes being diffused. There are concrete and identified advantages and explanations of the criticality of the claimed differently diffused surfaces.

Further, as previously noted, criticality of a feature does not define obviousness. The non-obviousness of a range of values, within another range, may be supported by evidence or criticality of the claimed range, but criticality of any feature is not determinative of obviousness. As noted above, there are substantial reasons why one skilled in the art would not modify Background and Watai as suggested in the Office Action, and why even if combined the combination would not even set forth the claimed invention. Thus, it is respectfully submitted

that the above discussion regarding the criticality of the claimed diffusing surfaces outweighs any reliance on non-criticality in supporting the obviousness rational.

Lastly, on page 7, the Office Action indicates that if Background and Watai were modified as suggested, to read on the claimed invention, then the proffered combination would achieve the stated goals of improving illumination and controlling diffusing light in a substantial uniform manner.

However, it is respectfully submitted that there are more factors supporting non-obviousness and a conclusion that such a proposed combination could not read on the claimed invention, than there are factors supporting the Office Action stated obviousness.

The fact that two references could be modified to read on the claims does not mean that such a combination and further modification would have been obvious.

As noted above, there are substantial advantages in maintaining the directivity of the incident inclined light through the non-diffused slope and subsequent diffusing of the light by the second slope. Here, with such a configuration, the directivity of the incident light is maintained, and substantially larger amounts of incident light is ultimately received and transmitted by the light control element.

Only the present application provides for these advantages and explains how the claimed second diffused slope in combination with the non-diffused first slope can accomplish the same.

Conversely, the prism sheet of Watai is designed to achieve a different advantage for a different problem, that may not even be resident in Background.

Further, the relied upon selective diffusing of one slope over another slope in Watai is based upon light within the prism sheet traveling in a normal direction from the mirror, i.e., such an embodiment of Watai is available because both prism slopes receive equal amounts of light.

Differently, the arrangement of a single light source and inclined light guide plate in Background would primarily illuminate only the first slope of any prism sheet modified into the same. Thus, differently from the shown embodiment of Watai with a single slope being diffused, that embodiment is not directly applicable to the arrangement of Background.

Accordingly, in view of the above, it is respectfully submitted that it would not have been obvious to both modify Background to include the diffusing aspect of Watai, and further modify the combination to only diffuse a second slope opposite the slope that first receives the incident light.

Withdrawal of this rejection and allowance of all pending claims is again respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 5/6/08

By: _____
Stephen T. Boughner
Registration No. 45,317

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501